ORAN PARK REDEVELOPMENT

TOWN CENTRE - STAGE 1 CIVIL

BROWN
Smart Consulting

FOR DEVELOPMENT APPLICATION

FOR GREENFIELDS DEVELOPMENT COMPANY

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LOCALITY PLAN
N.T.S.

LGA CAMDEN COUNCIL

ORAN PARK TOWN

GREENFIELDS

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ORAN PARK REDEVELOPMENT
TOWN CENTRE - STAGE 1 CIVIL

Project No.:	Stage:	Milestone:	Drawing No.	Revision:
L06002.57A	1	DA	000	01

N

FUTURE
TRANCHE 7
DEVELOPMENT

ROAD No.1 (ORAN PARK DRIVE)

ROAD No.22

FUTURE
TOWN CENTRE

MAIN STREET

ENGINEERING PLAN DRAWING 01 OF 03

ENGINEERING PLAN DRAWING 02 OF 03

TOWN CENTRE
STAGE 1

TEMPORARY
OVERFLOW
CARPARK

ENGINEERING PLAN DRAWING 03 OF 03

ROAD No.2

(PETER BROCK DRIVE)

FUTURE
TOWN CENTRE
STAGE 2

TOWN PARK

FUTURE
TOWN CENTRE

CIVIC USE

CIVIC USE

LEISURE CENTRE SITE

SOIL & WATER MANAGEMENT PLAN

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SCALE 1:1000 (A1) SCALE 1:2000 (A3)

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TOWN CENTRE - STAGE 1 CIVIL

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Drawing Title:
SHEET LAYOUT PLAN

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GENERAL NOTES

GENERAL

G1 ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH CAMDEN COUNCIL'S ENGINEERING DESIGN, ENGINEERING CONSTRUCTION SPECIFICATION AND TO THE REQUIREMENTS OF THE PRINCIPAL CERTIFYING AUTHORITY/ ROADS AUTHORITY.

G2 INSPECTIONS BY PRINCIPAL CERTIFYING AUTHORITY/ ROADS AUTHORITY SHALL BE REQUESTED AT THE FOLLOWING STAGES AND THE WORKS APPROVED PRIOR TO THE CONTINUANCE OF ANY WORK:

- (a) FOLLOWING THE INSTALLATION OF EROSION AND SEDIMENT CONTROL STRUCTURES/MEASURES
- (b) PRIOR TO BACKFILLING PIPELINES, SUBSOIL DRAINS AND DAMS.
- (c) PRIOR TO CASTING OF PITS AND OTHER CONCRETE STRUCTURES, INCLUDING KERB AND GUTTER BUT FOLLOWING THE PLACEMENT OF FOOTINGS, FORMWORK AND REINFORCEMENT.
- (d) PRIOR TO PLACEMENT OF SUBBASE AND ALL SUB SEQUENT PAVEMENT LAYERS, A PROOF ROLLER TEST OF EACH PAVEMENT LAYER IS REQUIRED.
- (e) FORMWORKS PRIOR TO POURING CONCRETE IN PARKING AREAS FOR FOOTPATH CROSSING AND OTHER ASSOCIATED WORK.
- (f) PRIOR TO BACKFILLING PUBLIC UTILITY CROSSINGS IN ROAD RESERVES.
- (g) FINAL INSPECTIONS AFTER ALL WORKS ARE COMPLETED AND "WORK AS EXECUTED" PLANS HAVE BEEN SUBMITTED TO COUNCIL.

G3 NO TREES TO BE REMOVED UNLESS APPROVAL IS GRANTED BY COUNCILS LANDSCAPE COMPLIANCE OFFICER.

G4 MAKE SMOOTH JUNCTIONS WITH EXISTING WORKS

G5 NO WORK TO BE CARRIED OUT ON ADJOINING PROPERTIES WITHOUT THE WRITTEN PERMISSION FROM THE OWNER.

G6 VEHICULAR ACCESS AND ALL UTILITIES/SERVICES ARE TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION.

G7 ALL RUBBISH, BUILDINGS, SHEDS, AND FENCES ARE TO BE REMOVED TO THE SATISFACTION OF THE PRINCIPAL CERTIFYING AUTHORITY/ ROADS AUTHORITY.

EARTHWORKS

E1 EARTHWORKS ARE TO BE CARRIED OUT TO THE SATISFACTION OF THE PRINCIPAL CERTIFYING AUTHORITY/ ROADS AUTHORITY. UNSUITABLE MATERIALS ARE TO BE REMOVED FROM ROADS AND LOTS PRIOR TO FILLING. THE CONTRACTOR IS TO ARRANGE AND MAKE AVAILABLE COMPACTION TESTING RESULTS FOR ALL AREAS THAT CONTAIN FILL IN EXCESS OF 200mm.

E2 COMPACTION OF EARTHWORKS SHALL CONTINUE UNTIL A DRY DENSITY RATIO OF 95% FOR SITE FILLING AND 100% FOR ROAD PAVEMENT SUBGRADES HAS BEEN ACHIEVED IN ACCORDANCE WITH TEST METHOD AS1289.5.3.1 OR AS1289.5.1.1.

E3 THE CONTROL TESTING OF EARTHWORKS SHALL BE IN ACCORDANCE WITH THE GUIDELINES IN AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS". WHERE IT IS PROPOSED TO USE TEST METHOD AS1298.5.8.2 TO DETERMINE THE FIELD DENSITY, A SAND REPLACEMENT METHOD SHALL BE USED TO CONFIRM THE RESULTS.

E4 THE SUBDIVISIONALGEOTECH ACCREDITED CERTIFIER, SHALL HAVE A LEVEL1 RESPONSIBILITY FOR ALL FILLING AS DEFINED IN APPENDIX B AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS' AND AT THE END OF THE WORKS SHALL CONFIRM THE EARTHWORKS COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION AND DRAWINGS BY WRITTEN NOTIFICATION.

E5 IN AREAS TO BE FILLED WHERE THE SLOPE OF THE NATURAL SURFACE EXCEEDS 1(V):4(H), BENCHES ARE TO BE CUT TO PREVENT SLIPPING OF THE PLACED FILL MATERIAL AS REQUIRED BY THE COUNCIL

E6 ALL BATTERS ARE TO BE SCARIFIED TO A DEPTH OF 50mm TO ASSIST THE ADHESION OF TOP SOIL TO BATTER FACE.

E7 PROVIDE MINIMUM 150mm AND MAXIMUM 300mm TOPSOIL WITHIN FOOTPATHS, FILLED AREAS AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION. TOPSOILED AREAS TO BE STABILISED WITH APPROVED VEGETATION A MAXIMUM OF 2 DAYS AFTER TOPSOILING AND ARE TO BE WATERED TO ENSURE GERMINATION.

E8 THE CONTRACTOR SHALL CONTROL SEDIMENTATION, EROSION AND POLLUTION DURING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF 'MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION' PROVIDED BY LANDCOM.

E9 A 1-METRE WIDE, CONTINUOUS STRIP OF COUCH GRASS SHALL BE PLACED BEHIND THE BACK OF ALL KERBS AND OTHER CONCRETE STRUCTURES IMMEDIATELY AFTER THE COMPLETION OF THE FOOTPATH GRADING OR OTHER ELEMENTS AS APPLICABLE, SHALL BE MAINTAINED AND REPLACED AS A REQUIREMENT DURING THE CONSTRUCTION MAINTENANCE PERIOD.

ROADWORKS

R1 SUBGRADES AND SUBBASES ARE TO BE COMPACTED IN ACCORDANCE WITH COUNCILS CONSTRUCTION SPECIFICATION.

R2 SUBSOIL DRAINS TO BE PROVIDED ON BOTH SIDES OF ROADS (EXCEPT WHERE THERE IS STORMWATER DRAINAGE AND ON SUSPENDED ROADWAYS)

R3 LIPLESS PERAMBULATOR CROSSINGS ARE TO BE PROVIDED IN ALL KERB RETURNS WHERE REQUIRED BY COUNCIL.

R4 SERVICE CONDUITS TO BE PLACED AS DIRECTED BY ALL PUBLIC UTILITY AUTHORITIES INCLUDING ENDEAVOUR ENERGY, TELSTRA AND SYDNEY WATER.

R5 ALL PERMANENT ROADS MUST BE SEALED WITH A SINGLE COAT OF FLUSH SEAL AND 50mm OF AC TO BE APPLIED IN TWO 25mm THICK LAYERS. THE FINAL AC IS TO BE BONDED WITH COUNCIL AND PLACED FOLLOWING APPROVAL FROM COUNCIL EXCEPT ON SUSPENDED ROADWAYS

R6 SIGNPOSTING AND LINE MARKING SHALL CONFORM TO AS 1742.2 'TRAFFIC CONTROL DEVICES FOR GENERAL USE'. RAISED RETRO-REFLECTIVE PAVEMENT MARKERS TO CONFORM TO AS1906 ' RETRO-REFLECTIVE DEVICES AND MATERIALS FOR ROAD TRAFFIC CONTROL PURPOSES' . ALL APRONS AND KERB FACE ON CENTRAL ISLANDS OF ROUNDABOUTS AND ALL OTHER ISLANDS TO BE DELINEATED BY REFLECTIVE WHITE MARKING.

R7 ALL LOT NUMBERS AND STREET NAMES TO BE STENCILED ON KERB FACE.

R8 STREET SIGNS TO COUNCIL STANDARD MUST BE INSTALLED BY THE OWNER/APPLICANT/SUPERINTENDANT, STREET NAMES MUST BE STENCILED ON KERB AT INTERSECTIONS.

DRAINAGE

S1 ALL PIPES TO BE SPIGOT AND SOCKET, RUBBER RING JOINTED UNLESS OTHERWISE NOTED.

S2 ALL LONGITUDINAL PIPELINES IN ROADS MUST BE LOCATED UNDER KERB AND GUTTER AND BACKFILLED WITH APPROVED GRANULAR MATERIAL UNLESS OTHERWISE APPROVED BY THE COUNCIL ENGINEER.

S3 DRAINAGE LINES MUST BE BACKFILLED WITH APPROVED GRANULAR MATERIAL IN TRAFFICABLE AREAS. THREE (3) METRES OF SUBSOIL DRAINAGE WRAPPED IN GEOTEXTILE STOCKING MUST BE PROVIDED ON THE UPSTREAM SIDE OF ALL DOWNSTREAM PITS.

S4 ALL GULLY PITS TO COUNCILS STANDARD AND LINTELS CENTRALLY PLACED AT SAG PITS.

S5 ALL PITS MUST BE BENCHED AND STREAMLINED. PROVIDE F72 REINFORCEMENT AND GALVINISED STEP IRONS IN ALL PITS OVER 1.2 METRES DEEP AS MEASURED FROM THE TOP OF GRATE TO THE INVERT OF THE PIT.

S6 CONCRETE IS TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32MPa AT 28-DAYS UNLESS OTHERWISE APPROVED BY THE COUNCIL ENGINEER.

S7 CATCH DRAINS MUST BE CONSTRUCTED AS REQUIRED BY PRINCIPAL CERTIFYING AUTHORITY/ ROADS AUTHORITY.

S8 ADEQUATE PROVISION IS TO BE MADE TO PREVENT SCOURING AND SEDIMENTATION FOR ALL DRAINAGE WORKS IN ACCORDANCE WITH COUNCILS REQUIREMENTS.

S9 PIT LINTELS ARE TO BE STENCILED WITH APPLICABLE DESTINATION STENCIL AVAILABLE FROM COUNCIL.

S10 PRECAST CONCRETE HEADWALL TO BE USED FOR PIPE OUTLETS UP TO 900 ϕ

S11 CONCRETE HEADWALLS FOR PIPE GREATER THAN 900 ϕ ARE TO BE CAST IN SITU IN ACCORDANCE WITH SD.21.

LEGEND

DESCRIPTION	PROPOSED	EXISTING	FUTURE
STORMWATER PIPELINE	375ϕ		
STORMWATER DRAINAGE PITS			
DRAINAGE LINE No. 3 DRAINAGE PIT No. 10	3/10		3/10
CONCRETE HEADWALL			
SUBSOIL DRAIN	SS SS		
STANDARD 150mm KERB AND GUTTER	K&G	EXIST. K&G	FUT. K&G
STANDARD ROLL KERB AND GUTTER	RK	EXIST. RK	FUT. RK
STANDARD KERB ONLY	KO	EXIST. KO	FUT. KO
STANDARD EDGE STRIP	ES	EXIST. ES	FUT. ES
STANDARD MOUNTABLE KERB	MK	EXIST. MK	FUT. MK
STANDARD DISH CROSSING	DC	EXIST. DC	FUT. DC
VEHICULAR CROSSING	VC		
PEDESTRIAN RAMP	PR		
EDGE OF BITUMEN	EOB		
ROAD PAVEMENT			
BENCHMARK		BM: 115 RL: 165.332	
BATTERS			
CONCRETE PATHWAY			
CONTOURS	99.5 99.0		99.5 99.0
SITE REGRADING AREA	CUT FILL		
SERVICE LINES SEWER, GAS, WATER, ELECTRICITY			
COMMUNICATION LINES TELSTRA, FIBRE OPTIC			
OVER HEAD LINES AND POLES			
SERVICE PITS TELECOM PIT, ACCESS CHAMBER, HYDRANT, STOP VALVE, AIR VALVE			
LIMIT OF CONSTRUCTION			
LIMIT OF STAGE			
FENCE POST AND RAIL FENCE SECURITY FENCE			
LOT NUMBERS	D-LOTNO	E-LOTNO	F-LOTNO
TREES TO RETAIN TREES TO REMOVE			
RETAINING WALL			
ROCK WALL			

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Client: GREENFIELDS DEVELOPMENT COMPANY

Project: ORAN PARK REDEVELOPMENT TOWN CENTRE - STAGE 1 CIVIL

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Drawing Title: STANDARD NOTES & LEGEND

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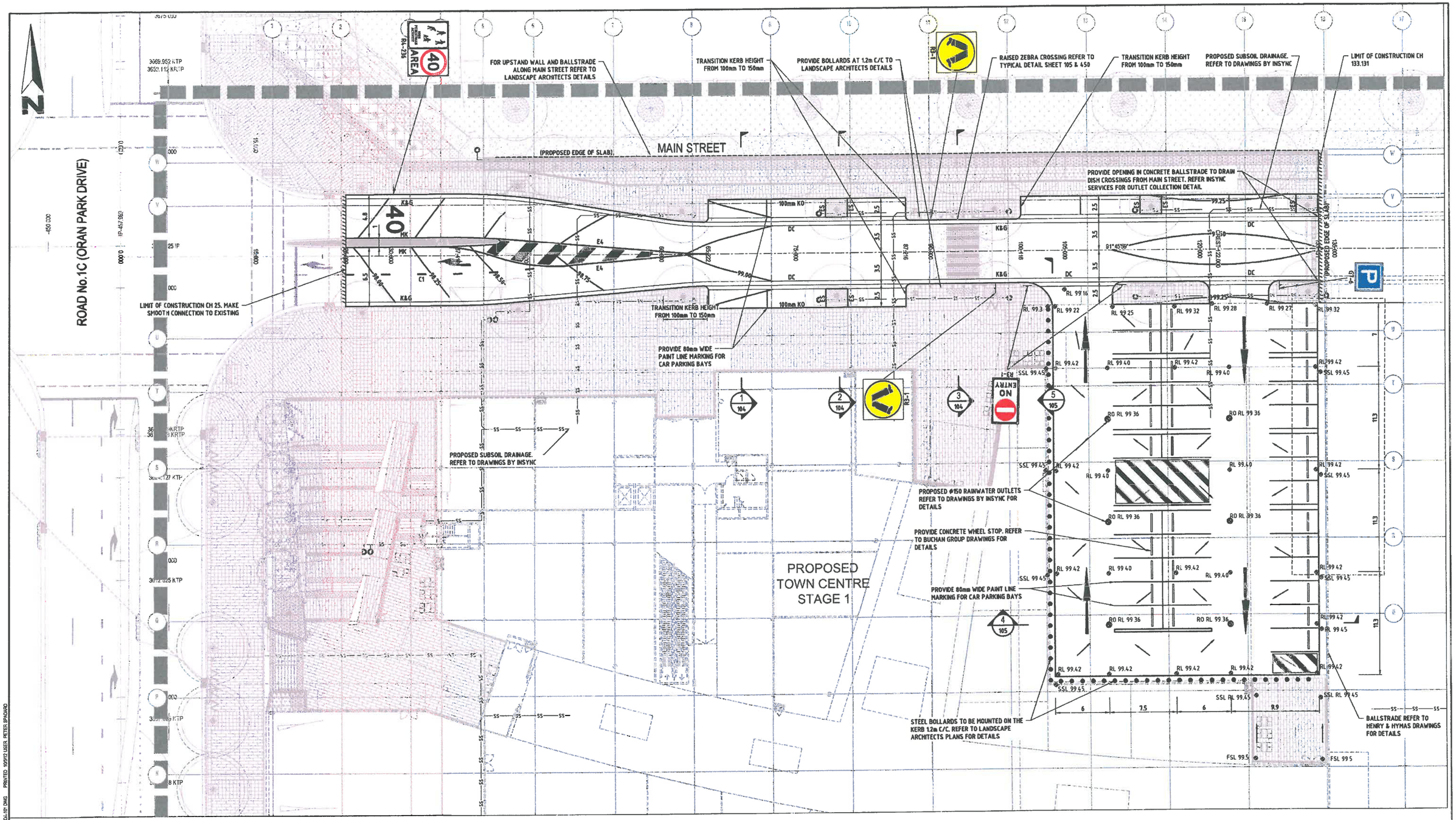

PLAN
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NOTE:
FOR MAIN STREET LONGITUDINAL AND TYPICAL CROSS SECTIONS REFER SHEET No.104

Revisions						
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Drawing Title: ENGINEERING PLAN DRAWING 01 OF 03

Project No.:	Stage:	Milestone:	Dwg No.:	Revision:
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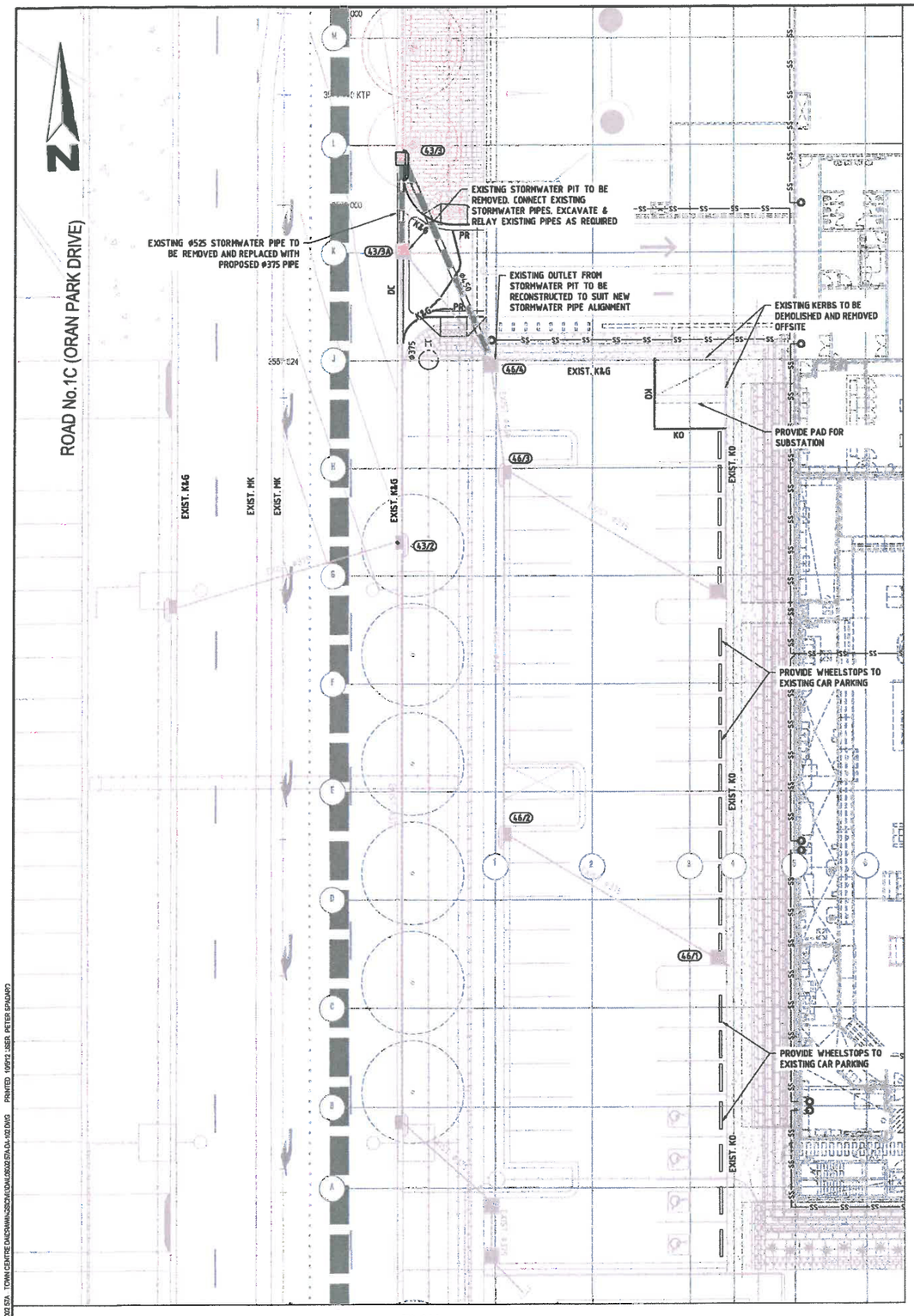

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Project: ORAN PARK REDEVELOPMENT
TOWN CENTRE - STAGE 1 CIVIL

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Drawing Title: ENGINEERING PLAN DRAWING 02 OF 03

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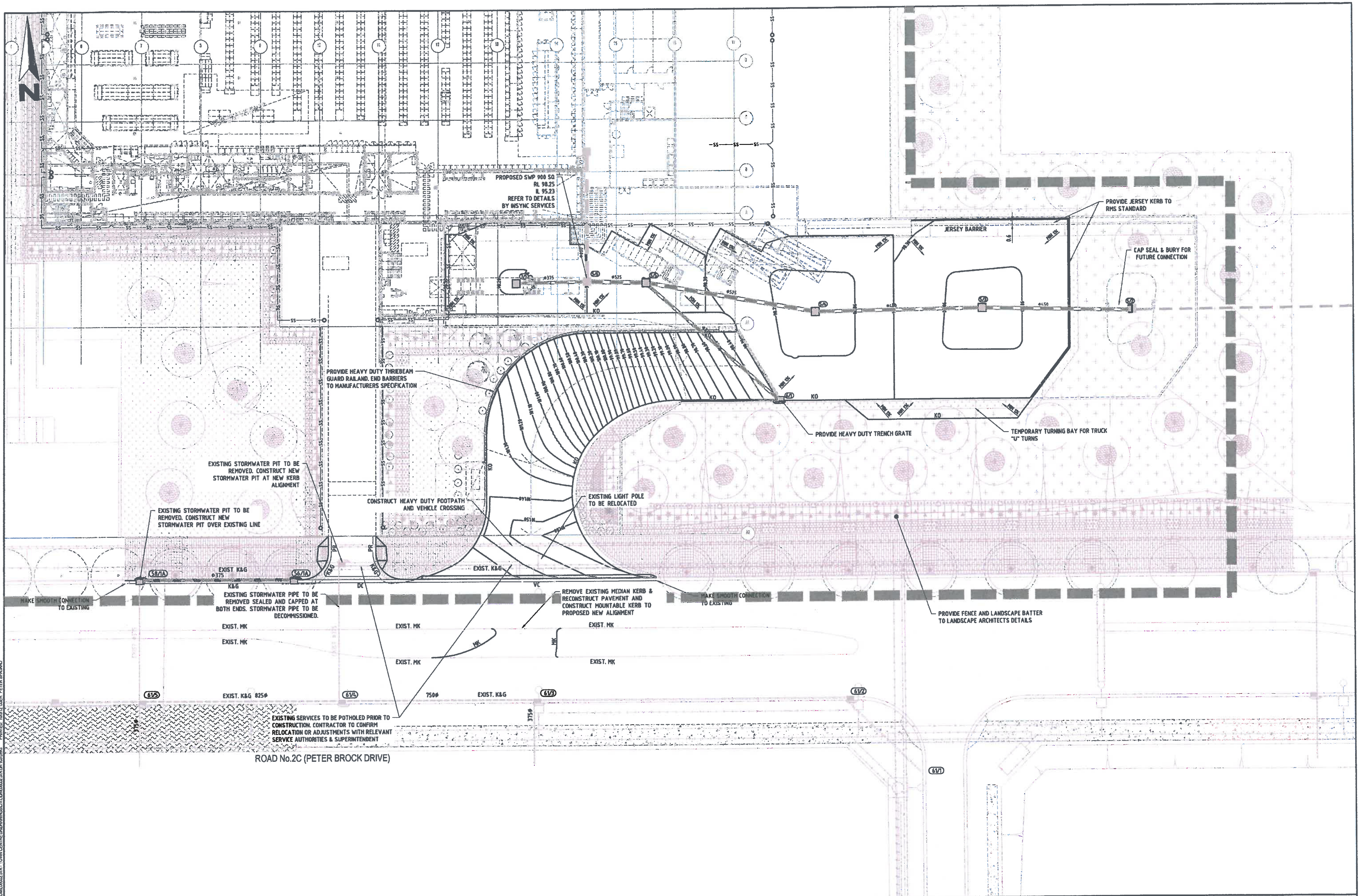

PROPOSED SWP 900 SQ
RL 98.25
IL 95.23
REFER TO DETAILS
BY INSYNC SERVICES
PROVIDE JERSEY KERB TO RMS STANDARD
JERSEY BARRIER
CAP SEAL & BURY FOR FUTURE CONNECTION
PROVIDE HEAVY DUTY THRIEBEAM GUARD RAILAND. END BARRIERS TO MANUFACTURERS SPECIFICATION
PROVIDE HEAVY DUTY TRENCH GRATE
TEMPORARY TURNING BAY FOR TRUCK "U" TURNS
EXISTING STORMWATER PIT TO BE REMOVED. CONSTRUCT NEW STORMWATER PIT AT NEW KERB ALIGNMENT
EXISTING STORMWATER PIT TO BE REMOVED. CONSTRUCT NEW STORMWATER PIT OVER EXISTING LINE
CONSTRUCT HEAVY DUTY FOOTPATH AND VEHICLE CROSSING
EXISTING LIGHT POLE TO BE RELOCATED
EXIST. K&G
MAKE SMOOTH CONNECTION TO EXISTING
EXISTING STORMWATER PIPE TO BE REMOVED SEALED AND CAPPED AT BOTH ENDS. STORMWATER PIPE TO BE DECOMMISSIONED.
REMOVE EXISTING MEDIAN KERB & RECONSTRUCT PAVEMENT AND CONSTRUCT MOUNTABLE KERB TO PROPOSED NEW ALIGNMENT
PROVIDE FENCE AND LANDSCAPE BATTER TO LANDSCAPE ARCHITECTS DETAILS
EXIST. MK
EXIST. K&G 825ø
750ø
375ø
EXISTING SERVICES TO BE POTHOLED PRIOR TO CONSTRUCTION. CONTRACTOR TO CONFIRM RELOCATION OR ADJUSTMENTS WITH RELEVANT SERVICE AUTHORITIES & SUPERINTENDENT
ROAD No.2C (PETER BROCK DRIVE)

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Drawing Title: ENGINEERING PLAN DRAWING 03 OF 03

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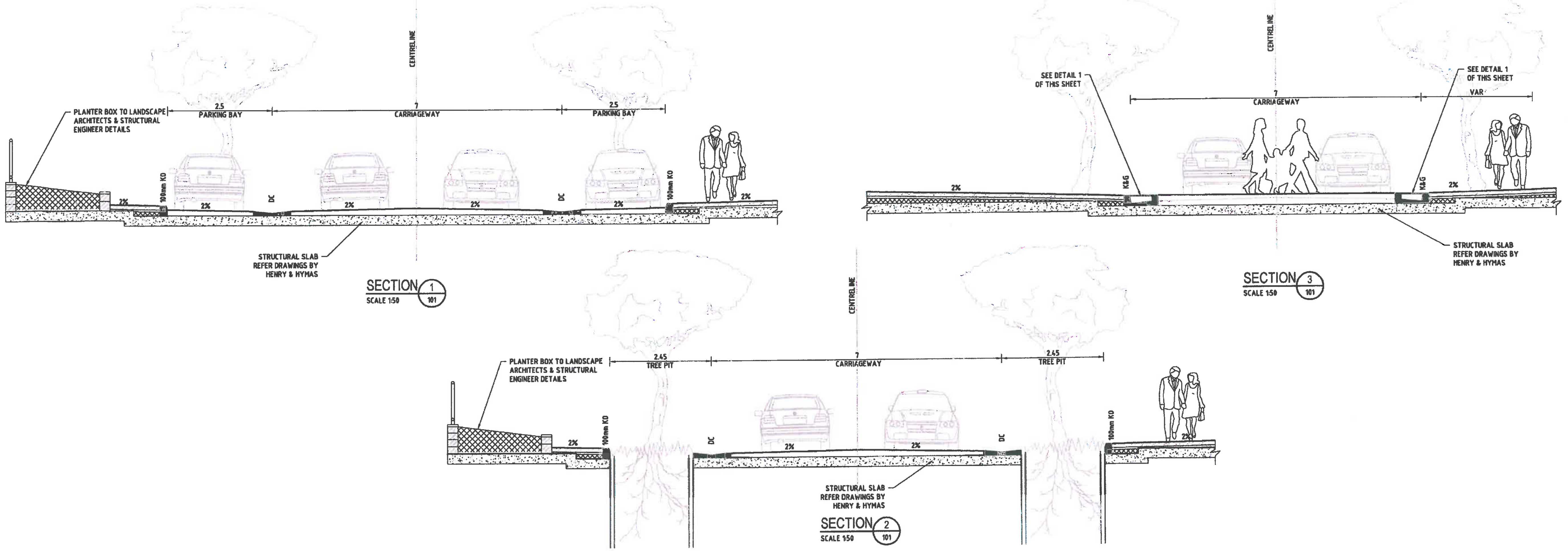

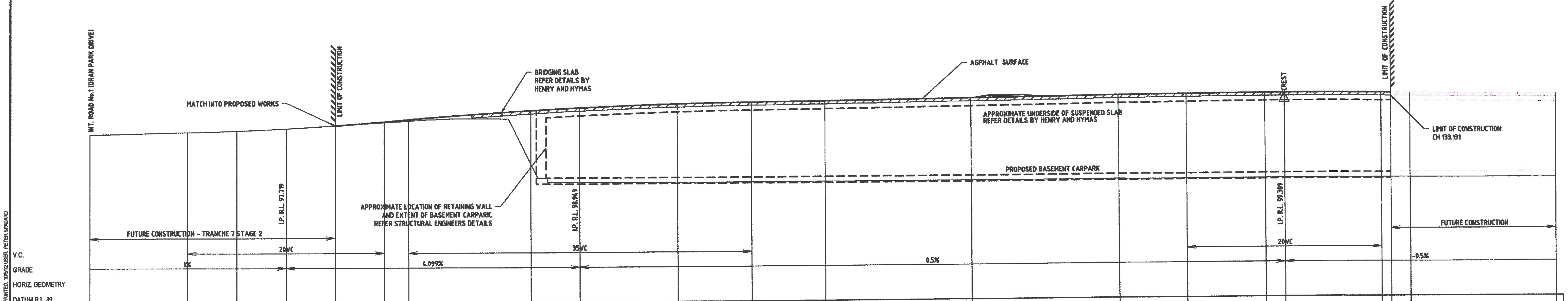

W.A.E. LEVEL																					
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EXISTING LEVEL				97.333		97.936	98.087	95.968	95.028	95.016	95.012	95.009	95.004	95	94.997	94.995	94.994	94.991		94.99	94.985
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LONGITUDINAL SECTION CENTRELINE - MAIN ST

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Drawing Title:
MAIN STREET LONGITUDINAL & TYPICAL CROSS SECTIONS

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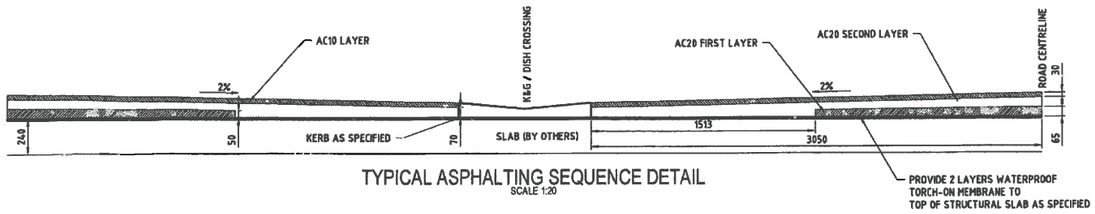

TYPICAL ASPHALTING SEQUENCE DETAIL
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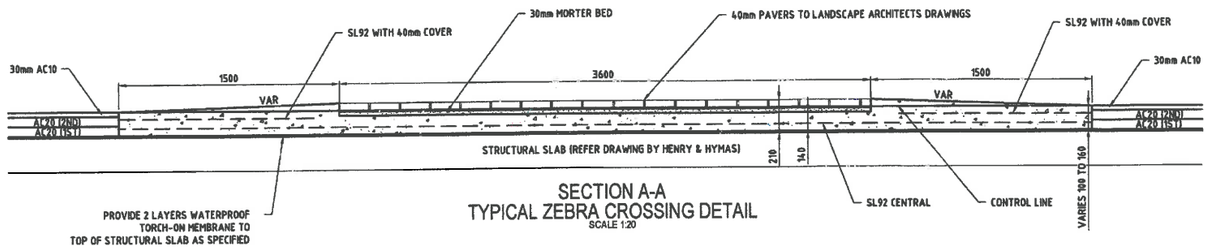
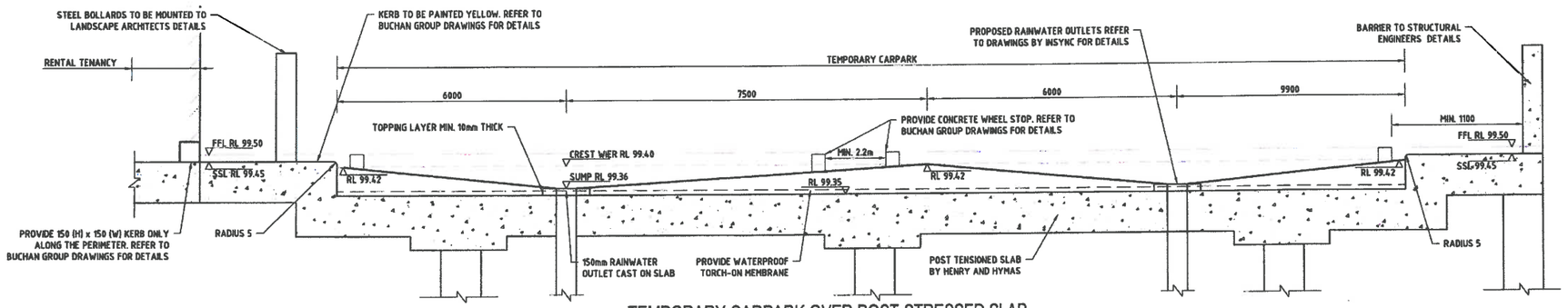


SECTION A-A
TYPICAL ZEBRA CROSSING DETAIL
SCALE 1:20



TEMPORARY CARPARK OVER POST-STRESSED SLAB
SECTION 4/101
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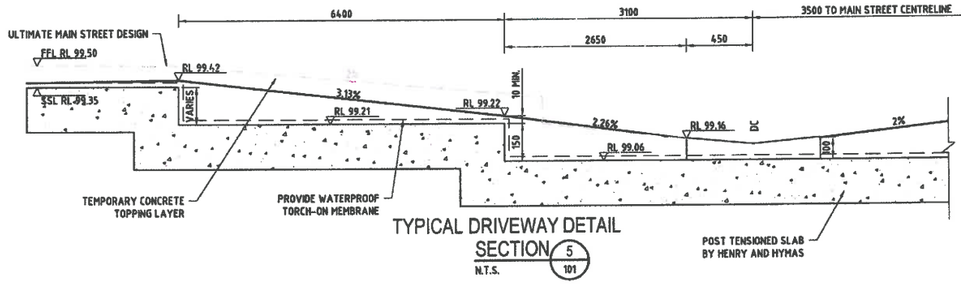

TYPICAL DRIVEWAY DETAIL
SECTION 5/101
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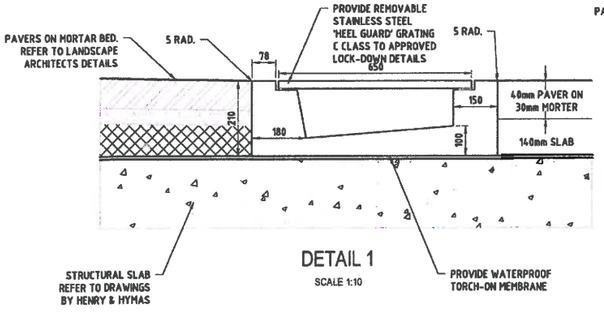

DETAIL 1
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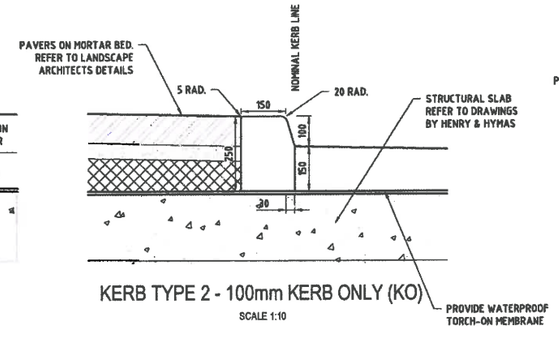

KERB TYPE 2 - 100mm KERB ONLY (KO)
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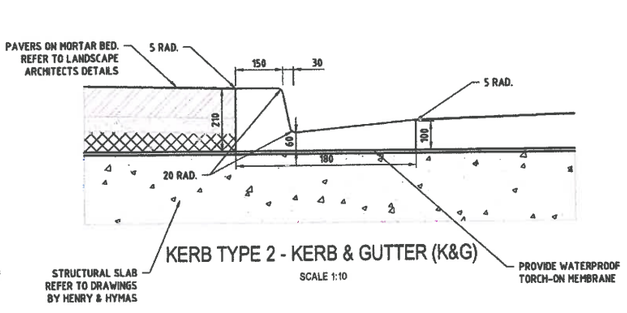
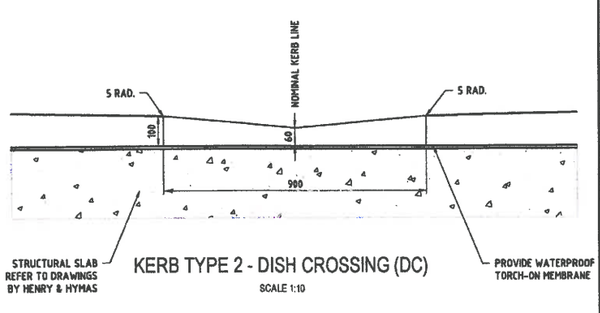


KERB TYPE 2 - KERB & GUTTER (K&G)
SCALE 1:10



KERB TYPE 2 - DISH CROSSING (DC)
SCALE 1:10

NOTES:

1. MASTIC EXPANSION JOINTS TO BE PLACED AT NO MORE THAN 6m SPACING & NO LESS THAN 3m SPACING
2. ALL CORNERS TO HAVE 25mm RADIUS U.N.O.

Revisions						
00	PS	RS	RS		14/03/2012	ORIGINAL ISSUE
01	PS	RS	RS		5/10/2012	CLIENT AMENDMENTS
First Issue	PS Drawn	RS Design	RS Check	Appd.	14/03/2012 Date	Revision Details

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0
SCALE 1:10 (A1) SCALE 1:20 (A3)
0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
SCALE 1:20 (A1) SCALE 1:40 (A3)

Approval:
BY: TOBY TAMES
BE (Hons) GradDipMgt CPESC CPEng MIEAust
SIGN:
DATE: 5/10/12

Client: GREENFIELDS DEVELOPMENT COMPANY

Project: ORAN PARK REDEVELOPMENT
TOWN CENTRE - STAGE 1 CIVIL

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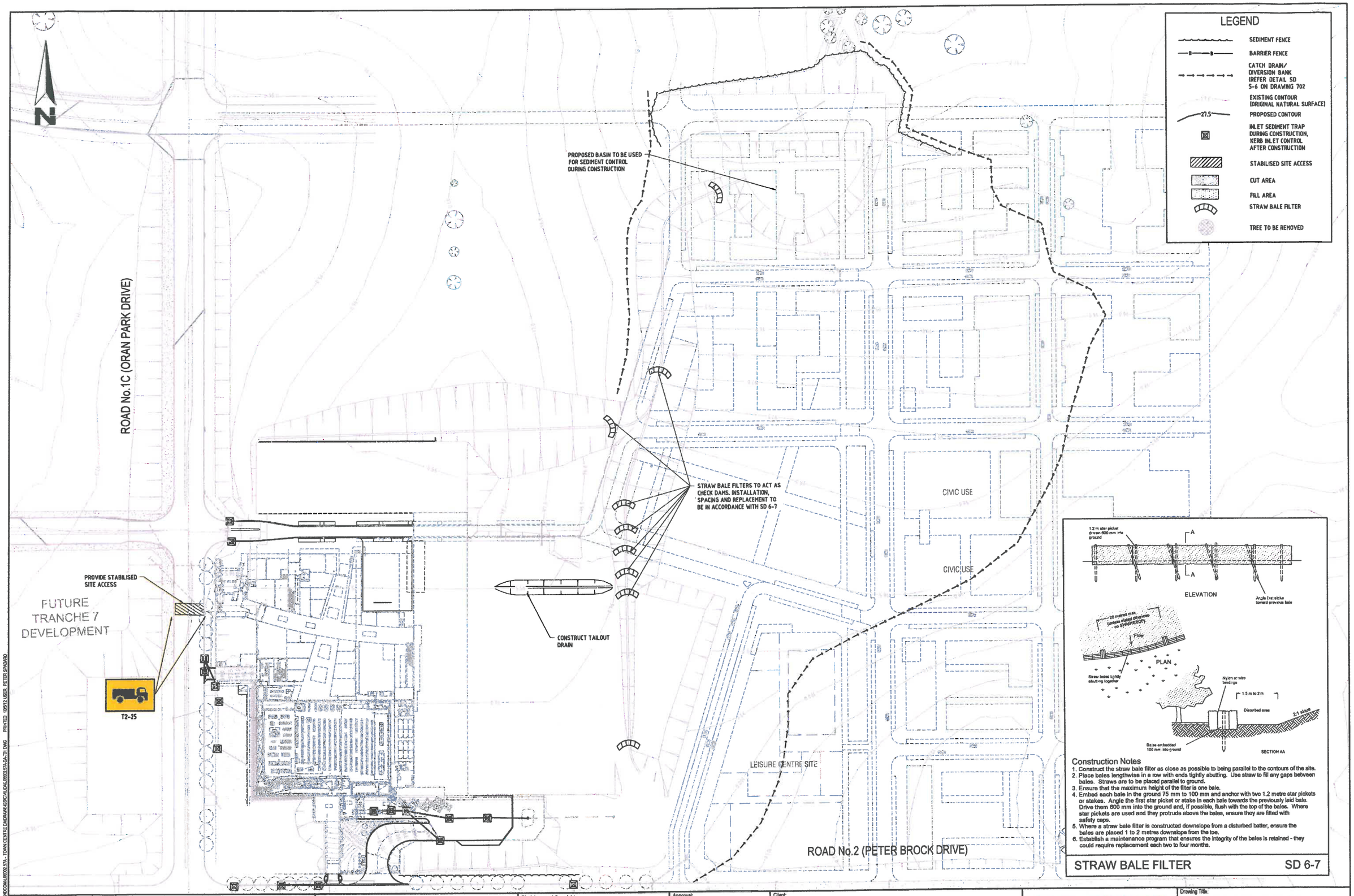
Drawing Title: KERB & SLAB DETAILS

Project No.:	Stage:	Milestone:	Dwg No.:	Revision:
L06002.57A	1	DA	105	01



Revisions						
00	PS	RS	RS		14/03/2012	ORIGINAL ISSUE
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First Issue	Drawn: PS	Design: RS	Check: RS	Appd:	Date: 14/03/2012	Revision Details

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TOWN CENTRE - STAGE 1 CIVIL

BROWN Smart Consulting

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Drawing Title: BULK EARTHWORKS & SOIL & WATER MANAGEMENT PLAN

Project No.:	Stage:	Milestone:	Dwg No.:	Revision:
L06002.57A	1	DA	701	01

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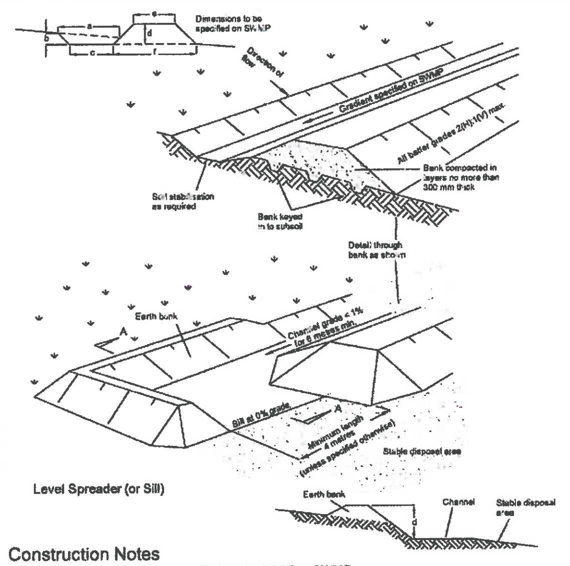
SEDIMENT & EROSION CONTROL NOTES

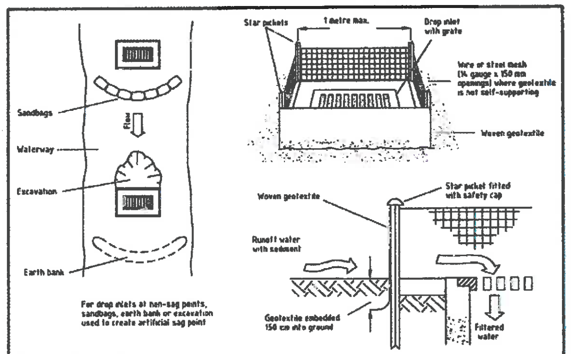
1. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE COMMENCEMENT OF ANY WORKS BEING CARRIED OUT. ALL SOIL AND EROSION MEASURES SHALL BE MAINTAINED AND KEPT IN PLACE FOR THE FULL DURATION OF THE WORKS AND SHALL ONLY BE REMOVED AT FINAL STABILISATION OF THE WORKS. WHERE IT IS NECESSARY TO UNDERTAKE STRIPPING IN ORDER TO CONSTRUCT A SEDIMENT CONTROL DEVICE ONLY SUFFICIENT GROUND SHALL BE STRIPPED TO ALLOW CONSTRUCTION.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED AS INDICATED ON THESE DRAWINGS. LOCATION AND EXTENT OF SOIL AND WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT.
3. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ANY NECESSARY CONTROL IS IN PLACE EVEN THOUGH SUCH CONTROL MAY NOT BE SHOWN ON THE PLAN.
4. THE CONTRACTOR SHALL INFORM ALL SUBCONTRACTORS AND ALL EMPLOYEES OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSTREAM AREAS
5. APART FROM SEDIMENT BASINS, THE CONTRACTOR SHALL REGULARLY MAINTAIN SEDIMENT AND EROSION CONTROL STRUCTURES AND DESILT SUCH STRUCTURES PRIOR TO THE REDUCTION IN CAPACITY OF 30% DUE TO ACCUMULATED SEDIMENT. THE SEDIMENT SHALL BE DISPOSED OF ON SITE IN A MANNER APPROVED BY THE ENGINEER.
6. THE CONTRACTOR SHALL TEMPORARILY REHABILITATE WITHIN TEN (10) DAYS ANY DISTURBED AREAS PROVIDING A MINIMUM 60% COVER. FINAL REHABILITATION IS TO BE PROVIDED WITHIN A FURTHER 60 DAYS WITH A MINIMUM 70% COVER.
7. THE CONTRACTOR SHALL PROVIDE WATERING OF THE VEGETATED BATTERS FOR MAINTENANCE PERIOD. PLANT, MACHINERY AND VEHICLES SHALL NOT BE DRIVEN OVER GRASSED AREAS UNLESS ON AN APPROVED HAULAGE ROUTE.
8. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS QUICKLY AS POSSIBLE TO MINIMISE RISK OF EROSION.
9. SITE ACCESS SHALL BE RESTRICTED TO THE NOMINATED POINTS. THE CONTRACTOR SHALL PROVIDE STABILISED SITE ACCESS.
10. DUST AND SITE DISTURBANCE MUST BE KEPT TO A MINIMUM. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS MUST BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO REDUCE WIND EROSION. ERECT BARRIER FENCING TO MINIMISE LAND DISTURBANCE BY PREVENTING VEHICULAR AND PEDESTRIAN ACCESS TO AREAS BEING REHABILATATED AND LANDS THAT DO NOT NEED TO BE DISTURBED BY THIS PROJECT.
11. STOCKPILE TOPSOILS, SUBSOILS AND OTHER MATERIALS SEPARATELY.
12. TOPSOIL SHALL BE STORED IN LOW MOUNDS NO MORE THAN 2 METRES HIGH AND RE-USED WITHIN TWO MONTHS TO MAINTAIN ACTIVE POPULATIONS OF BENEFICIAL SOIL MICROBES AND SEED.
13. PLACE ALL STOCKPILES AT LEAST FIVE METRES FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS, ESPECIALLY EARTH BANKS AND ROADS. IF NECESSARY, EARTH BANKS OR DRAINS WILL BE CONSTRUCTED TO DIVERT LOCALISED RUN-ON.
14. TURN TOPSOIL STOCKPILES OVER TO AERATE THEM AT MONTHLY INTERVALS. ENSURE VEGETATION IS NOT INCORPORATED INTO THE SOIL.
15. AVOID REVERSING THE SOIL PROFILE MATERIALS DURING FILL OPERATIONS - REPLACE DISTURBED SOILS IN THEIR ORIGINAL ORDER.
16. ON COMPLETION OF MAJOR EARTHWORKS AND BEFORE ADDING TOPSOIL, LEAVE DISTURBED LANDS WITH A LOOSE SURFACE. ALTERNATELY, DISTURBED AREAS PREVIOUSLY COMPACTED BY CONSTRUCTION WORKS WILL BE RIPPED TO MORE THAN 200-MM ALONG THE CONTOUR BEFORE APPLYING TOPSOIL
17. PROVIDING MATERIALS ARE AVAILABLE, SPREAD TOPSOIL TO A MINIMUM DEPTH OF 75mm IN REVEGETATION AREAS ON SLOPES OF 4(H):1(V) OR LESS AND TO A DEPTH OF 40 TO 60mm IN REVEGETATION AREAS STEEPER THAN 4:1.
18. LEAVE TOPSOIL IN A SCARIFIED OR ROUGH CONDITION ONCE REPLACED TO HELP MOISTURE INFILTRATION AND REDUCE SOIL EROSION.
19. ENSURE SOIL IS THOROUGHLY SOAKED TO A DEPTH OF 75mm (RAIN OR IRRIGATION) IMMEDIATELY BEFORE PLANTING.
20. HANDLE TOPSOIL ONLY WHEN IT IS MOIST (NOT WET OR DRY) TO AVOID DECLINE OF SOIL STRUCTURE
21. THE CONTRACTOR SHALL MAINTAIN A LOG BOOK DETAILING:
    - RECORDS OF ALL RAINFALL
    - CONDITION OF SOIL AND WATER MANAGEMENT STRUCTURES
    - ANY APPLICATION OF FLOCCULATING AGENTS TO SEDIMENT BASIN
    - VOLUMES OF ALL WATER DISCHARGED FROM SEDIMENT BASINS
    - ANY ADDITIONAL REMEDIAL WORKS REQUIRED.
22. THE LOG BOOK SHALL BE MAINTAINED ON A WEEKLY BASIS AND BE MADE AVAILABLE TO ANY AUTHORISED PERSON UPON REQUEST. THE ORIGINAL LOG BOOK SHALL BE ISSUED TO THE PROJECT MANAGER AT THE COMPLETION OF WORKS
23. ALL ROAD EMBANKMENTS TO BE STABILISED AS PER LANDSCAPE ARCHITECTS DETAILS.
24. A SELF AUDITING PROGRAM SHOULD BE ESTABLISHED BASED ON A CHECK SHEET DEVELOPED FOR THE SITE. A SITE INSPECTION USING THE CHECK SHEET SHOULD BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE AND IMMEDIATELY FOLLOWING RAINFALL EVENTS THAT CAUSE RUNOFF.
25. UNDERTAKE THE SELF AUDIT BY:
    - WALKING AROUND THE SITE SYSTEMATICALLY (E.G. CLOCKWISE)
    - RECORDING THE CONDITION OF EVERY BMP EMPLOYED
    - RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH BMP
    - RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
    - FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER/SITE OPERATOR FOR THEIR INFORMATION
26. IN PARTICULAR, INSPECT:
    - LOCATIONS WHERE VEHICLES ENTER AND LEAVE THE SITE
    - ALL INSTALLED EROSION AND SEDIMENT CONTROL MEASURES, ENSURING THEY ARE OPERATING CORRECTLY
    - AREAS THAT MIGHT SHOW WHETHER SEDIMENT OR OTHER POLLUTANTS ARE LEAVING THE SITE OR HAVE POTENTIAL TO DO SO
    - ALL DISCHARGE POINTS, TO ASSESS WHETHER THE EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO THE RECEIVING WATERS
27. A SITE INSPECTION USING THE CHECK SHEET WILL BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE, AND IMMEDIATELY FOLLOWING RAINFALL EVENTS GREATER THAN 5mm IN 24 HOURS.



Construction Notes

1. Construct at the gradient specified on the ESCP or SWMP, normally between 1 and 5 percent
2. Avoid removing trees and shrubs if possible - work around them.
3. Ensure the structures are free of projections or other irregularities that could impede water flow.
4. Build the drains with circular, parabolic or trapezoidal cross sections, not V-shaped, at the dimensions shown on the SWMP.
5. Ensure the banks are properly compacted to prevent failure.
6. Complete permanent or temporary stabilisation within 10 days of construction following Table 5.2 in Landcom (2004).
7. Where discharging to erodible lands, ensure they outlet through a properly constructed level spreader.
8. Construct the level spreader at the gradient specified on the ESCP or SWMP, normally less than 1 percent or level.
9. Where possible, ensure they discharge waters onto either stabilised or undisturbed disposal sites within the same subcatchment area from which the water originated. Approval might be required to discharge into other subcatchments.

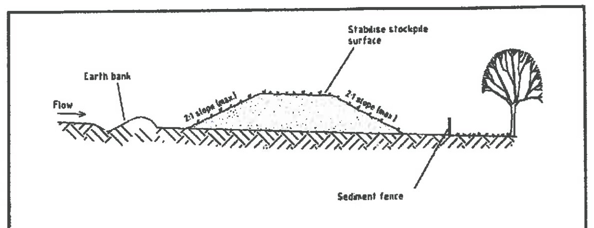
EARTH BANK (HIGH FLOWS) — SD 5-6



Construction Notes

1. Fabricate a sediment barrier made from geotextile or straw bales.
2. Follow Standard Drawing 6-8 for installation procedures for geofabric. Reduce the picket spacing to 1 metre centres.
3. In waterways, artificial sag points can be created with sandbags or earth banks as shown in the drawing.
4. Do not cover the inlet with geotextile unless the design is adequate to allow for all waters to bypass it.

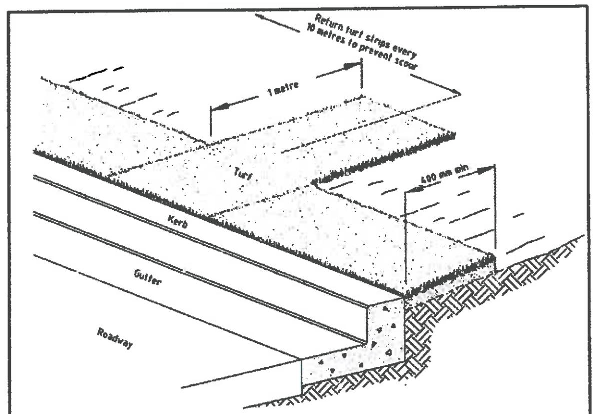
GEOTEXTILE INLET FILTER — SD 6-12



Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

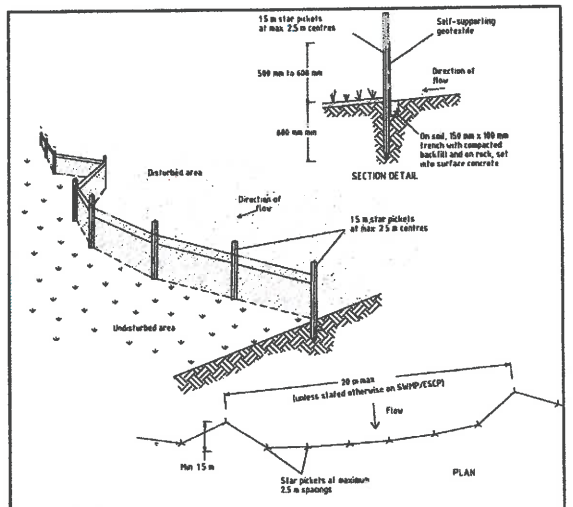
STOCKPILES — SD 4-1



Construction Notes

1. Install a 400 mm minimum wide roll of turf on the footpath next to the kerb and at the same level as the top of the kerb.
2. Lay 1.4 metre long turf strips normal to the kerb every 10 metres.
3. Rehabilitate disturbed soil behind the turf strip following the ESCP/SWMP.

KERBSIDE TURF STRIP — SD 6-13



Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

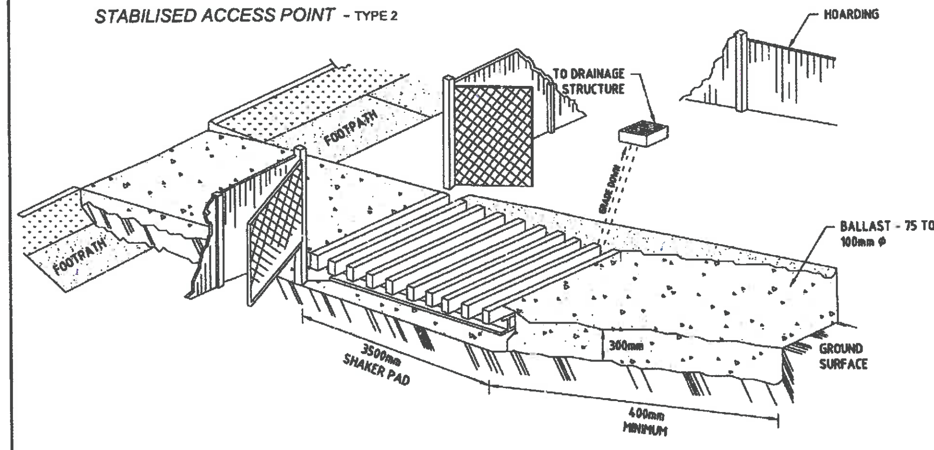
SEDIMENT FENCE — SD 6-8

STABILISED ACCESS POINT

TYPE II SAP

THE TYPE II SAP DESIGN IS MORE DEFINED IN THAT IT REQUIRES AN AREA OF BALLAST WITHIN THE SITE COMBINED WITH A SHAKER PAD; ADJACENT THE SHAKER PAD AND IN THE PUBLIC WAY IS A TEMPORARY (CONCRETE) VEHICULAR CROSSING. (SEE DIAGRAM)

STABILISED ACCESS POINT - TYPE 2



IN BOTH TYPE I AND TYPE II SAP'S, THE TEMPORARY VEHICULAR CROSSING MUST:

- CONNECT TO AN EXISTING GUTTER LAYBACK (WHERE THE KERB AND GUTTER EXIST). IF A GUTTER LAYBACK DOES NOT EXIST THEN THE CONNECTION MUST BE MADE TO THE GUTTER BY REMOVING THE ADJCENT KERB SECTION ONLY.
- CONNECT TO A DISH CROSSING (WHERE KERB AND GUTTER DOES NOT EXIST). IF A DISH CROSSING DOES NOT EXIST, THEN IT MUST BE CONSTRUCTED IN ACCORDANCE WITH DETAILS CONTAINED IN COUNCIL'S ISSUED FOOTPATH CROSSING LEVELS.

IT SHOULD BE NOTED THAT THESE TYPES OF SAPS ARE CONSIDERED TO BE APPLICABLE FOR THE MAJORITY OF ACTIVITIES HOWEVER SOME SITES MAY REQUIRE SPECIAL CONSIDERATION.

SHAKER PAD (CATTLE GRID)

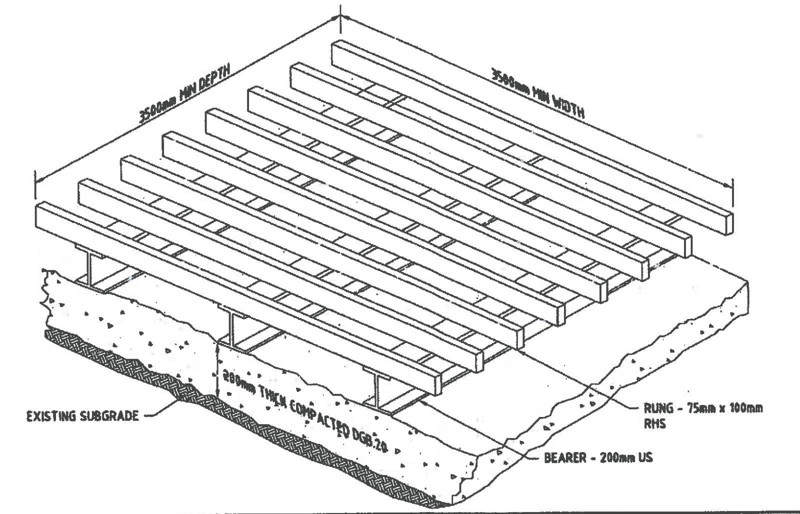
A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFERE FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSOPRY IN TYPE II SAP'S)

SHAKER PADS CAN BE DESIGNED AND CONSTRUCTED TO ENABLE RE-USE ON FUTURE PROJECTS.

THE SHAKER PAD:

- MUST BE DESIGNED AND CERTIFIED BY A PRACTICING STRUCTURAL ENGINEER. THE CERTIFIED DESIGN SHOULD BE SUBMITTED WITH THE RELEVENT APPLICATION.
- CAN BE CONSTRUCTED FROM ANY SUITABLE MATERIAL.
- MUST BE LOCATED ON A SUITABLY PREPARED AND COMPACTED SUB-GRADE/BASE MATERIAL.
- MUST BE SITUATED SUCH THAT THE RUNGS OF THE SHAKER PAD ARE LEVEL WITH THE ADJOINING NATURAL SURFACE.
- MUST BE A MINIMUM OF 3.5m IN LENGTH.
- MUST BE A MINIMUN OF 3.5m IN WIDTH.
- MUST HAVE CLEAR SPACING BETWEEN RUNGS OF 200 - 250mm.
- RUNGS MUST HAVE A MAXIMUM WIDTH (BEARING AREA) OF 75mm.
- MUST HAVE A MINIMUM CLEAR DEPTH OF 300mm IE FORM THE ROP OF THE RUNG TO THE FINISHED SUB-GRADE/BASE LEVEL.

THE SHAKER PAD MUST BE PROVIDED WITH SUITABLE BARRIERS AT THE SIDES TO ENSURE THAT ALL TYRES OF VEHICLES LEAVING THE SITE TRAVERSE THE DEVICE.



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TOWN CENTRE - STAGE 1 CIVIL

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Drawing Title: SOIL & WATER MANAGEMENT NOTES & DETAILS

Project No.:	Stage:	Milestone:	Dwg No.:	Revision:
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